

Zoological Record

Vol. 90, Sect. 5, 1953

# ECHINODERMA

COMPILED BY

A. G. BRIGHTON, M.A.

LONDON

PUBLISHED BY

THE ZOOLOGICAL SOCIETY OF LONDON

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PRICE TWO SHILLINGS AND SIXPENCE

June, 1955

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†*Codiopsis stephensoni* sp. n. Cretaceous Texas, COOKE Prof. Paper U.S. geol. Surv. 254A p. 8 pl. i figs. 9–11.—*C. meslei*, GIGOUT 63 p. 351.

*Colobocentrotus mertensii*, OHSHIMA 153 p. 160 fig. 2, pl. i fig. 4, pl. ii figs. 10–11.

†*Conoclypeus pinfoldi* sp. n. Eocene Pakistan, GILL J. Paleont. 27 pp. 843–844 pl. 91 figs. 1–3; *pilgrimi*, Id. p. 843 pl. 91 fig. 4.

†*Conulus stephensoni* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. geol. Surv. 254A p. 11 pl. iii figs. 8–13.

*Coronanthus* see *Clypeaster*.

†*Cottaldia* aff. *benettiae*, DARTEVELLE 41 p. 28.

†*Crucibrissus cabrerai* sp. n. Eocene Cuba, ROIG Rev. Agric. Habana 91 pp. 1953 p. 67 pl. x pars, pl. xxi.

*Ctenocidaris geliberti* p. 8, *perrieri* p. 9, *speciosa* p. 8 pl. iv, BERNASCONI 8.

†*Cylindrolampas* see *Echinolampas*,

†*Cypholampas* see *Echinolampas*.

†*Deakia armadilloensis* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 pp. 165–166 pl. x figs. 1–2.

*Dendraster laevis* sp. n. California & N.W. Mexico pp. 312–313 pl. i figs. 34–36, *mexicanus* sp. n. Lower California pp. 313, 317 pl. li figs. 37–39, *rugosus* sp. n. Lower California pp. 318–319 pl. lii figs. 40–41, H. L. CLARK Allan Hancock Pacif. Exped. 8 1948; *excentricus* p. 310 pl. xlix fig. 32, Id.

†*Dendraster ashleyi* p. 68 pl. xvii figs. 11–12, pl. xviii figs. 12–14, pl. xix fig. 6, pl. xx figs. 1, 5–6, cf. *coalingaensis* p. 67 pl. vii figs. 6, 8, WOODRING & BRAMLETTE 241.

*Diadema antillarum*, MILLOTT 123 p. 497 figs. 1–11, 125 p. 98 figs. 1–2, 127 p. 973 figs. 1–3 [iridophores].—*D. antillarum*, Turbellaria parasitic in, WESTBLAD 238.

†*Ditremaster olbrechtsi* sp. n. Eocene Congo & Angola, DARTEVELLE Ann. Mus. Congo belge 13 pp. 148–153 figs. 48–50, pl. xi figs. 1–5.

†*Dowillaster benguellensis*, DARTEVELLE 41 p. 144 figs. 45–46.

†*Echinarachnius rumoensis* sp. n. Miocene Japan, HAYASAKA & SHIBATA J. Fac. Sci. Hokkaido Univ. Geol. Min. 8 1952 pp. 82–85 figs. 1 a–c.—*E. naganoensis* sp. n. Pliocene Japan, MORISHITA Mem. Coll. Sci. Kyoto B 20 pp. 220–222 fig. 3a, pl. i fig. 4; *microthyroides* p. 219 pl. i fig. 3, *parma obesus* p. 221 fig. 3d, *E. rumoensis* p. 221 fig. 3c, *subtymidus* p. 221 fig. 3b, Id.—*E. mirabilis*, SHIKAMA 182 pl. xlv fig. 14.

†*Echinarachnius* (*Kewia*) *nipponica*, SHIKAMA 182 pl. xxxii fig. 17.

*Echinocardium cordatum*, DAKIN, BENNETT & POPE 40 p. 332 pl. xciii fig. 1.—*E. cordatum*, LAFON 100 p. 152.—*E. cordatum, flavescens*, larval stages, REES 165 figs.—*E. mortenseni*, TORTONESE 219 p. 271.—*E. cordatum* p. 221,



*flavescens* p. 222, *mediterraneum* p. 222, *mortenseni* p. 223 pl. i fig. 9, TORTONESE 220.—*E. flavescens*, Turbellaria parasitic in, WESTBLAD 238 p. 271.

†*Echinoconus castanea*, MAKSIMOVIĆ & MARKOVIĆ 114 p. 186 pl. i figs. 4-5.

†*Echinocorys texanus*, COOKE 33 p. 25 pl. x figs. 1-2, pl. xi fig. 17.—*E. sp.*, MÜLLER 147 p. 32 pl. i fig. 3.—*E. scutata*, WILCOX 239 p. 83 figs. 1-6.

†*Echinocrinus* sp., CHRONIC 27 p. 165 pl. xxxv figs. 13-17.

*Echinocyamus pusillus*, TORTONESE 220 p. 220.

†*Echinocyamus crispus*, MORISHITA 142 p. 61 pl. vi figs. 4-5.

*Echinodiscus bisperforatus*, DARTEVELLE 41 p. 74 fig. 14, pl. xv figs. 1-2.

†*Echinodiscus chikuzenensis*, MORISHITA 139 p. 107 fig. 2c.

†*Echinodiscus (Amphiope) neuparthi*, DARTEVELLE 41 p. 75 figs. 15-16, pl. viii figs. 4, 6, pl. xv fig. 3.

†*Echinolampas consolationis* sp. n. Miocene Cuba, ROIG An. Acad. Habana 91 pp. 148-149 pl. iv figs. 9-11; *brachytrona*, Id. p. 148.—*E. atrophus podolicus* subsp. n. Miocene Ukraine, SZÖRÉNYI Geol. hung. Ser. Palaeont. 23 pp. 34, 35 pl. vi fig. 4; *E. barcinensis* pp. 34, 35, *hemisphaericus* pp. 34, 84 pl. iii fig. 2, Id.—*E. angustipetalus* p. 143 pl. xii fig. 2, *dumasi* p. 143 pl. xiii fig. 3, ČECHOVIČ & SENEŠ 19.—*E. spp.*, DARTEVELLE 41 p. 57 pl. vi figs. 1-3 on bas.—*E. angulatus* p. 174 pl. i fig. 1, *pyramidalis* p. 174 pl. i fig. 2, PINAR & ROMAN 163.—*E. yoshiwarai*, SHIKAMA 182 pl. xli fig. 4.

†*Echinolampas (Cylindrolampas) santhiagensis* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 pp. 151-152 pl. v figs. 3-4; *altissima*, Id. p. 150.

†*Echinolampas (Cypholampas) eocenica* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 p. 149 pl. v figs. 1-2.

†*Echinolampas (Heterolypeus) hungaricus*, ČECHOVIČ & SENEŠ 19 p. 143 pl. xii fig. 1, pl. xiii fig. 1.

†*Echinolampas (Macrolampas) gigas* sp. n. Miocene Cuba, ROIG Rev. Agric. Habana for 1953 pp. 55-56 pls. iii (pars), vii-viii.

†*Echinolampas (Palaeolampas) acuminatus* p. 175 pl. i fig. 3, aff. *francei* p. 178 fig. 1, pl. i fig. 4, PINAR & ROMAN 163.

†*Echinolampas (Progonolampas) moronensis* pp. 152-153 pl. vi figs. 1-2, *torrense* p. 152 pl. v figs. 5-6, spp. n. Oligocene Cuba, ROIG An. Acad. Habana 91.

*Echinometra oblonga* p. 281 pl. xlv fig. 24, *vanbrunti* p. 293 pl. xlvi fig. 25, H. L. CLARK 30.—*E. lacunter*, DARTEVELLE 41 p. 38 fig. 6, pl. A fig. 6, pl. i figs. 7-8.—*E. lucunter* p. 5 figs., *viridis* p. 6 fig., FONTAINE 60.

†*Echinometra lacunter*, DARTEVELLE 41 p. 38 figs. 7-8, pl. A fig. 5, pl. i figs. 4-6.

*Echinoneus cyclostomus*, FONTAINE 60 p. 7 figs.

†*Echinoneus robustus* sp. n. Oligocene Cuba, ROIG An. Acad. Habana 91 p. 140 pl. iii figs. 1-2.

†*Echinopsis friryi*, DARTEVELLE 41 p. 33 pl. iii figs. 3-15, 17-20.

†*Echinospatangus* sp. indet., HASSAN 68 p. 128.

*Echinus acutus* p. 215 pl. i fig. 8, *melo* p. 217, TORTONESE 220.

*Encope emarginata*, BERNASCONI 8 p. 27 pl. xiii, pl. xvii figs. 8-11, pl. xxxii fig. 3.—*Encope* p. 319 with *E. cocosi* sp. n. Cocos Id. p. 330 pl. lvi figs. 48-49, *ecuadorensis* sp. n. Ecuador pp. 333-334 pl. lix figs. 54-55, *fragilis* sp. n. Mexico pp. 335-336 pl. lx figs. 56-57, *insularis* sp. n. Mexico pp. 336-337 pl. lxi figs. 58-59, *irregularis* sp. n. Colombia to Costa Rica pp. 332-333 pl. lviii figs. 52-53, *laevis* sp. n. Nicaragua pp. 327-328 pl. liv fig. 45, pl. lv fig. 46, H. L. CLARK Allan Hancock Pacif. Exped. 8 1948; *E. galapagensis* p. 331 pl. lvii figs. 50-51, *grandis* p. 325 pl. liii fig. 42, *micropora* p. 329 pl. lv fig. 47, *perspectiva* p. 326 pl. liii fig. 43, *wetmorei* p. 326 pl. liv fig. 44, Id., text-figs. 1-2.

†*Eoscutum* see *Fibularia*.

†*Epiaster carvalhoi* sp. n. Cretaceous Angola, DARTEVELLE Ann. Mus. Congo belge 13 pp. 142-143 pl. x figs. 1-2; *angolensis* p. 141, *catumbellensis* p. 137 figs. 4-6, pl. x figs. 3-4, Id.

*Eucidaris thouarsii*, H. L. CLARK 30 p. 229 pl. xxxv fig. 1.—*E. tribuloides africana*, DARTEVELLE 41 p. 8 fig. 1, pl. A fig. 3.—*E. tribuloides*, FONTAINE 60 p. 4 fig.

†*Eucidaris tribuloides africana*, DARTEVELLE 41 p. 8 pl. A fig. 4, pl. i figs. 1-3.

†*Eupatagus brodermanni* pp. 159-160 pl. ix figs. 1, 4, *calistoides* pp. 160-161 pl. vi fig. 8, *casanovai* p. 159 pl. ix figs. 2-3, *turibacoensis* pp. 157-158 pl. viii figs. 3-4, spp. n. Eocene Cuba, ROIG An. Acad. Habana 91; *alatus* p. 156, *attenuatus* p. 156, *ocalanus* p. 161, Id.

†*Eupatagus (Perispatangus) dara-densis*, DARTEVELLE 41 p. 165 fig. 53, pl. xi figs. 6-8.

†*Eupatagus (Spatangomorpha) pinar-ensis* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 p. 157 pl. vii figs. 3-4.

*Faorina chinensis*, HAYASAKA 71 p. 217 pl. xiv figs. 1-6.

†*Faujasia chelonium* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. geol. Surv. 254A p. 14 pl. iv figs. 11-14.

†*Fibularia sandalina* sp. n. Miocene Ukraine, SZÖRÉNYI Geol. hung. Ser. Palaeont. 23 pp. 13, 60 pl. v fig. 6.

†*Fibularia (Eoscutum) seefriedi*, COX 36 p. 35 pl. v figs. 17-20.

*Fibularia (Fibulariella) acuta*, TOKIOKA 218 p. 146 figs. 1-2.

*Genocidaris maculata*, TORTONESE 220 p. 214.

†*Globator vauhani* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. geol. Surv. 254A p. 12 pl. iv figs. 1-4.

*Goniocidaris maculata*, TORTONESE 219 p. 271.

*Goniomaretia laevis*, H. L. CLARK 30 p. 347 pl. lxx figs. 80-81.

†*Goniopygus zitteli telostocensis* subsp. n. Cretaceous Mexico, MALDONADO-KOERDELL An. Escu. nac. Cienc. biol. Méx. 7 pp. 38-39 pl. ii figs. 38-40; *G. bolensis*, Id. p. 38.

*Guebhardanthus* see *Clypeaster*.

†*Haimea cylindrica* p. 141 pl. iii figs. 6-7, *gigantea* p. 143 pl. iii fig. 11, *pentagona* pp. 142-143 pl. iii figs. 8-9, *subcylindrica* pp. 141-142 pl. iii figs.

4-5, spp. n. Eocene Cuba, ROIG An. Acad. Habana 91; *caillaudi*, Id. p. 143 pl. iii fig. 3.

†*Hardouinia mcglameryae* sp. n. Cretaceous U.S.A., COOKE Prof. Pap. U.S. geol. Surv. 254A p. 24 pl. viii figs. 23-26; *aequorea* p. 22 pl. viii figs. 15-22, *bassleri* p. 22 pl. vii figs. 6-11, *florealis* p. 23 pl. viii figs. 11-14, *kellumi* p. 21 pl. vii figs. 1-5, *micrococcus* p. 21 pl. vi figs. 1-10, pl. vii fig. 12, *mortonis* p. 19 pl. v figs. 19-21 with var. *emmonsii* p. 20 pl. v figs. 22-24, *H. potosiensis* p. 19, *stantoni* p. 23 pl. viii figs. 7-10, *taylori* p. 24 pl. viii figs. 1-6, Id.

*Heliocidaris erythrogramma* p. 331 pl. lxxxix, *tuberculata* p. 332 pl. xc, DAKIN, BENNETT & POPE 40.

†*Hemiaster amelianus* sp. n. Cretaceous Guatemala p. 35 pl. xvi fig. 1, *arcuolensis* sp. n. Cretaceous Alabama pp. 32-33 pl. xii figs. 12-16, *sabinal* sp. n. Cretaceous Texas p. 34 pl. xiii figs. 7-10, COOKE Prof. Pap. U.S. geol. Surv. 254A; *beechei* p. 31, *delawarensis* p. 35 pl. xiv figs. 6-9, *humphreysanus* p. 30 pl. xii figs. 1-4, *jacksoni* p. 33 pl. xii figs. 5-11, "H." *kümmeli* p. 35 pl. xiii figs. 5-6, *H. texanus* p. 33 pl. xiii figs. 1-4, *ungula* p. 34 pl. xiv figs. 10-14, *welleri* p. 35 pl. xiv figs. 15-17, *wetherbyi* p. 31 pl. xii figs. 17-18, Id.—*H. gonzalezmuñozii* sp. n. Cretaceous Cuba, ROIG An. Acad. Habana 91 pp. 170-171 pl. xi figs. 3-4.—*H. reineckeii* p. 146, *H. ?* sp. p. 146 fig. 47, pl. iv figs. 5-6, DARTEVELLE 41.—*H. chauveneti*, *meslei*, GIGOUT 63 p. 362.

†*Hemicidaris villadai* sp. n. Cretaceous Mexico, MALDONADO-KOERDELL An. Escu. nac. Cienc. biol. Méx. 7 pp. 27-28 pl. i figs. 22-24.

†*Hemicidaris (Pseudocidaris) clunifera*, MALDONADO-KOERDELL 115 p. 26 pl. i figs. 19-21.

*Hemiheliopsis fonti*, DARTEVELLE 41 p. 85 figs. 17-18.

†*Hemipatagus* sp., HASSAN 69 p. 15 pl. A fig. 1.

*Hesperocidaris asteriscus* sp. n. Panama, H. L. CLARK Allan Hancock Pacif. Exped. 8 1948 pp. 233-234 pl. xxxvi fig. 4, pl. xxxvii figs. 5-6; *panamensis* p. 230 pl. xxxv fig. 2, *perplexa* p. 231 pl. xxxvi fig. 3, Id.

†*Hessotiara zuberi* sp. n. Jurassic Switzerland, JEANNET Vjschr. naturf. Ges. Zürich 98 pp. 176–177 figs. 1–5.

†*Heteroclypeus* see *Echinolampas*.

†*Heterosalenia alloiteau* sp. n. Jurassic N. Africa, ZOEKE Bull. Soc. géol. Fr. 6 2 pp. 249–252 figs. 1–2, pl. xib figs. 1–3.

†*Holaster feralis* sp. n. Cretaceous U.S.A., COOKE Prof. Pap. U.S. geol. Surv. 254A pp. 26–27 pl. ix figs. 1–5, pl. x fig. 7.—*H. lerichei* sp. n. Cretaceous Angola, DARTEVELLE Ann. Mus. Congo belge 13 pp. 131–135 fig. 40, pl. ix figs. 1–4; *dombeensis*, Id. p. 130.—*H. laevis*, MAKSIMOVIĆ & MARKOVIĆ 114 p. 186.

†*Holactypus montalvensis* sp. n. Cretaceous Cuba, ROIG An. Acad. Habana 91 p. 138 pl. i figs. 2–3.—*H.* sp., DARTEVELLE 41 p. 186 fig. 57, pl. xix figs. 1–12.

*Holopneustes pycnotilus*, DAKIN, BENNETT & POPE 40 p. 330 pl. xcii fig. 1.

†*Hypsochelys fuentes* p. 55 pl. v, pl. vi (pars), *holguinensis* pp. 54–55 pls. iii–iv (pars) spp. n. Miocene Cuba, ROIG Rev. Agric. Habana for 1953.—*H. doma* p. 179, *montesiensis* p. 178 pl. i fig. 5, PINAR & ROMAN 163.

†*Hypsoheteroclypus* nom. n. for type *Hypsochelys doma* Pomel 1887 Miocene Algiers, SZÖRÉNYI Geol. hung. Ser. Palaeont. 23; *vicinoconoideus* sp. n. pp. 33, 83 pl. vi figs. 2–3, *plagiosomus corsicanus* subsp. n. pp. 28, 78 pl. iv fig. 1, Miocene Europe, Id.; *H. acuminatus* pp. 32, 82 pl. vi fig. 1, *hungaricus* pp. 31, 81 pl. iii fig. 3, *montesiensis* pp. 30, 80 pl. v fig. 3, *plagiosomus* with subsp. *lamberti* pp. 30, 80 pl. v figs. 1–2 & *subpentagonalis* pp. 29, 78 pl. iv fig. 2, *H. pyramidalis* pp. 32, 83 pl. ii fig. 4, Id.

*Idiobryssus coelus*, H. L. CLARK 30 p. 343 pl. lxvii figs. 71–73.

†*Isomicraster danei* p. 29 pl. xi figs. 11–13, *rossi* p. 29 pl. xi figs. 15–16, spp. n. Cretaceous U.S.A., COOKE Prof. Pap. U.S. geol. Surv. 254A.

*Kewia* see *Echinarachnius*.

*Laganidea* see *Clypeaster*.

†*Lajanaster rojasi* sp. n. Oligocene Cuba, ROIG Rev. Agric. Habana for 1953 p. 58 pl. x pars.

†*Lambertona* gen. n. for type *Victoriaster lamberti* Roig Eocene Cuba, ROIG Mem. Soc. cubana Hist. nat. 21 p. 257 pls. xxvii–xxviii.

†*Lanieria uvaldana* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. geol. Surv. 254A p. 10 pl. iii figs. 1–3.

*Laubeanthus* see *Clypeaster*.

†*Lefortia trojana* sp. n. Cretaceous U.S.A., COOKE Prof. Pap. U.S. geol. Surv. 254A p. 17 pl. iv figs. 8–10.

†*Leiocidaris capelloi*, DARTEVELLE 41 p. 13.

*Leptoclypus* see *Clypeaster*.

†*Linthia yessoensis* sp. n. Palaeogene Japan, MINATO J. geol. Soc. Japan 56 1950 pp. 158–159 figs. 1–2.—*L. variabilis*, COOKE 33 p. 36 pl. xiv figs. 18–25.—*L. nipponica*, MORISHITA 140 p. 222 pl. i figs. 5–7.—*L. nipponica* pl. xli fig. 3, *praenipponica* pl. xxxii fig. 16, SHIKAMA 182.

†*Loriola picteti*, MALDONADO-KOERDELL 115 p. 29 pl. ii figs. 28–30.

*Lovenia cordiformis*, H. L. CLARK 30 p. 347 pl. lxxi figs. 82–83.

*Loxechinus albus*, BERNASCONI 8 p. 23 pl. vii fig. 1, pl. xi, pl. xii figs. 1–9.—*L. albus*, H. L. CLARK 30 p. 265 pl. xliii fig. 19.

*Lytechinus anamesus* p. 247 pl. xli fig. 14, *pictus* p. 249 pl. xli fig. 15, *semituberculatus* p. 261 pl. xli fig. 16, H. L. CLARK 30.—*L. variegatus*, FONTAINE 60 p. 5 fig.—*L. semituberculatus*, TORTONESE 221 p. 479.

†*Macrolampas* see *Echinolampas*.

†*Macropneustes brodermanni* sp. n. Oligocene ? Cuba pp. 62–63 pl. xv pars, pl. xvi pars, *gómez-mazae* sp. n. Oligocene Cuba p. 63 pl. xvii, ROIG Rev. Agric. Habana for 1953.—*M.* cf. *baylei* ?, DARTEVELLE 41 p. 136.

†*Mauritanaster marroquinensis* sp. n. Oligocene Cuba, ROIG Rev. Agric. Habana for 1953 pp. 61–62 pl. xiv.

†*Megapatagus* gen. n. p. 58 for type *M. franciscanus* sp. n. Oligocene Cuba, ROIG Rev. Agric. Habana for 1953 pp. 59–60 pl. vi pars, pl. xi, *depressus* sp. n. Oligocene Cuba p. 60 pl. xii, *turibacoensis* sp. n. Eocene Cuba p. 61 pl. xiii, Id.

*Mellita platensis* p. 31 pl. xvi figs. 1-7, pl. xvii figs. 1-7, *quinquesperforata latimbulacra* p. 29 pl. ix fig. 7, pl. xiv, pl. xv figs. 1-7, pl. xxviii figs. 3-4, BERNASCONI 8.—*M. longifissa*, H. L. CLARK 30 p. 337 pl. lxii fig. 60.—*M. quinquesperforata* fig., *sexiesperforata*, FONTAINE 60 p. 7.

*Meoma grandis*, H. L. CLARK 30 p. 344 pl. lxviii figs. 76-77.—*M. ventricosa*, FONTAINE 60 p. 8 figs.

†*Merriamaster* cf. *perrini*, WOODRING & BRAMLETTE 241 p. 68 pl. x figs. 11-14.

*Mespilia globulus*, OHSHIMA 153 p. 159 pl. ii figs. 5-9.

†*Metalia palmeri* sp. n. Oligocene Cuba, ROIG An. Acad. Habana 91 pp. 166-167 pl. x fig. 3; *M. sp.*, Id. p. 167 pl. x fig. 4.

†*Micraster uddeni* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. geol. Surv. 254A pp. 37-38 pl. xv figs. 6-9; *americanus*, Id. p. 38 pl. xv figs. 10-13.—*M. ? sp. indet.*, HASSAN 68 p. 129.

*Moiria clotha*, H. L. CLARK 30 p. 341 pl. lxiv fig. 65.—*M. atropos*, FONTAINE 60 p. 8.

†*Moiria obesa*, SHIKAMA 182 pl. xli fig. 5.

†*Neocatopygus caobaense* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 p. 154 pl. vi figs. 3-4.

†*Neopatagus* gen. n. for type *Breynia cubensis* Cotteau 1875 Oligocene Cuba, ROIG Mem. Soc. cubana Hist. nat. 21 p. 258; *lajanensis* p. 260 pl. xxix (upper fig.), *stefaninii* p. 261 pl. xxix (lower fig.), Id.

*Notocidaridaris mortenseni*, BERNASCONI 8 p. 10.

†*Nucleopygus atlanticus brevior* subsp. n. Cretaceous Belgian Congo, DARTEVELLE Ann. Mus. Congo belge 13 pp. 51-52 pl. v figs. 2, 4-5, 10-11, 13; *N. atlanticus*, Id. p. 46 figs. 9-11, pl. iv figs. 1-4, 7-11, pl. v figs. 1, 3, 6-9, 12, 14-16.—*N. texanus*, COOKE 33 p. 13 pl. iv figs. 5-7.

†*Oligopygus herreraei* pp. 154-155 pl. vi figs. 6-7, 9, *sanjosephi* pp. 155-156 pl. vii figs. 1-2, spp. n. Eocene Cuba, ROIG An. Acad. Habana 91.

†*Oolopygus* see *Catopygus*.

†*Opissaster cantabrigiae* sp. n. Cretaceous Cuba, ROIG An. Acad. Habana 91 pp. 171-172 pl. xi figs. 5-6.

*Orthanthus* see *Clypeaster*.

†*Orthopsis aguilerai* sp. n. Cretaceous Mexico, MALDONADO-KOERDALL An. Escu. nac. Cienc. biol. Méx. 7 pp. 28-29 pl. i figs. 25-27.—*O. cf. ruppellii* p. 28, O. sp. p. 30, DARTEVELLE 41.

Ova see *Schizaster*.

*Oxyclypeina* see *Clypeaster*.

†*Palaeochinus canadensis* sp. n. Carboniferous Canada, KIER Geol. Mag., London 90 pp. 65-69 figs. 1-4.

†*Palaeolampas* see *Echinolampas*.

†*Palaeolampas elongatus* sp. n. Eocene Cuba, ROIG Rev. Agric. Habana for 1953 pp. 56-57 pl. iv (pars).—*P. alta*, plateia, ROIG 170 p. 150.

†*Palaeopneustes* cf. *cristatus*, MORISHITA 141 p. 27 pl. iii fig. 1.

*Paleanthus* see *Clypeaster*.

*Paracentrotus lividus*, PALOMBI & SANTARELLI 155 p. 214 figs.—*P. lividus*, TORTONESE 220 p. 218.—*P. lividus*, UBISCH 227 p. 294 fig. 1 [*Pluteus*].

†*Paralampas conceptionis* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 pp. 153-154 pl. vi fig. 5.

*Parapneustes cordatus* p. 36, *reductus* p. 37 pl. ix fig. 6, pl. xx figs. 1-3, pl. xxi figs. 7-10, BERNASCONI 8.

*Paratrinanthus* see *Clypeaster*.

†*Parascutella* gen. n. for type *Scutella leognanensis* Lambert 1903 Miocene France, DURHAM J. Paleont. 27 pp. 349-350 fig. 1A.

†*Paraster delgadoi* sp. n. Cuba p. 174 pl. xii figs. 5-6, *pinarensis* sp. n. Eocene Cuba p. 173 pl. xii figs. 3-4, ROIG An. Acad. Habana 91.

†*Parmulechinus*, diagnosis, DURHAM 50 pp. 349, 351.

*Pavaya* see *Clypeaster*.

†*Pedinopsis pondi*, COOKE 33 p. 7 pl. ii figs. 1-5.

†*Periaster* sp., DARTEVELLE 41 p. 157.

†*Pericosmus artemisiae* sp. n. Miocene Cuba pp. 168-169 pl. xi fig. 1, *valenzuelai* sp. n. Miocene Cuba pp. 167-168 pl. x fig. 5, *zaolettii* sp. n. Eocene Cuba pp. 169-170 pl. xi fig. 2, ROIG An. Acad. Habana 91.—*P. delgadoi* sp. n. Oligocene Cuba, ROIG Rev. Agric. Habana for 1953 p. 65 pl. xvi pars.



†*Perispatangus* see *Eupatagus*.

*Phyllacanthus parvispinus*, DAKIN, BENNETT & POPE 40 p. 329 pl. xci figs. 1-2.

†*Phyllobrissus cubensis*, COOKE 33 p. 17 pl. v figs. 11-14.

†*Phymosoma gigantea* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 p. 136 pl. i fig. 1.—*P. hilli*, COOKE 33 p. 9 pl. iii figs. 6-7.—*P. sp.*, DARTEVELLE 41 p. 18 figs. 3-4, pl. ii figs. 1-8.—*P. aquitanicum* p. 33, *mexicanum* p. 34, aff. *mexicanum* p. 35, *P. texanum* p. 36 pl. ii figs. 36-37, *volanum* p. 37, MALDONADO-KOERDELL 115.

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*Plexechinus nordenskjöldi*, BERNASCONI 8 p. 57.

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†*Porocidaris lopezi* sp. n. Eocene Cuba, ROIG An. Acad. Habana 91 p. 137 pl. i fig. 4.

†*Porosoma reesidei* sp. n. Cretaceous U.S.A., COOKE Prof. Paper U.S. geol. Surv. 254A pp. 6-7 pl. i figs. 5-8.

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†*Pseudananchys stephensoni* sp. n. Cretaceous Texas, COOKE Prof. Pap. U.S. Geol. Surv. 254A p. 26 pl. ix figs. 6-9.

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†*Pseudoastrodapsis* nom. n. for *Nipponaster* Durham 1952 non *Nipponaster* Lambert 1920, DURHAM J. Paleont. 27 p. 756.

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†*Schizaster kinasensis* sp. n. Pliocene Japan, MORISHITA Mem. Coll. Sci. Kyoto B20 pp. 224-225 pl. i fig. 8; *S. sp.*, Id. p. 226.—*S. gigas* p. 66 pl. xx, *pentagonalis* pp. 65-66 pl. xix, spp. n. Eocene Cuba, ROIG Rev. Agric. Habana for 1953.—*S. karreri*, ČECHOVIČ & SENEŠ 19 p. 139 pl. xiii fig. 2.—*S. douvillei*, DARTEVELLE 41 p. 159 figs. 51-52 pl. xii figs. 1-9, 11-12, 15-17.—*S. sp. ind.* p. 293 pl. i fig. 9, *S. ? sp. ind.* p. 294 pl. i fig. 10, KÖSTER 93.—*S. sp. indet.*, MORISHITA 142 p. 63 pl. vi fig. 6.—*S. bathypetalus*, *brachypetalus*, *dumblei*, ROIG 170 p. 175.—*S. nummulitica*, SHIKAMA 182 pl. xxxii fig. 18.—*S. ilotti* pp. 42, 94 pl. ii fig. 7, *karreri* pp. 41, 93 pl. ii fig. 5, *sardiniensis* pp. 42, 94 pl. ii fig. 6, SZÖRÉNYI 214.

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†*Aorocrinus douglassi*, LAUDON & SEVERSON 101 p. 527 pl. liii figs. 11–12.

†*Archaeocrinus subovalis* sp. n. Ordovician U.S.A., STRIMPLE J. Paleont. 27 p. 606 figs. 1–7.

†*Austinocrinus* with *Austinocrinus* subgen. n. for type *Austinocrinus komaroffi* de Lorient 1889 Cretaceous Turkestan, SIEVERTS-DORECK Mitt. geol. (St.) Inst. Hamb. 22 p. 113; *rothpletzi* p. 103 figs. 1-6, pl. xvii figs. 1-13, pl. xviii figs. 1-7, 12, *rothpletzi* var. p. 112 pl. xvii fig. 14, pl. xviii figs. 8-11, Id.

†*Austinocrinus* with *Penroseocrinus* subgen. n. for type *Balanocrinus mexicanus* Springer 1922 Cretaceous Mexico, SIEVERTS-DORECK Mitt. geol. (St.) Inst. Hamb. 22 p. 114 pl. xviii fig. 13.

†*Aviadorcrinus* with *A. sampelayoi*, SIEVERTS-DORECK 186 p. 85 pl. iv fig. 11.

†*Bactrocrinus*, SIEVERTS-DORECK 186 p. 79.

†*Batocrinus gallatinensis* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 pp. 526-527 pl. lii figs. 23-27, pl. lv figs. 19-21.

†*Bridgerocrinus* gen. n. for type *B. fairysensis* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 pp. 517-519 pl. li figs. 6-8, pl. lv fig. 5.

†*Cactocrinus magnidactylus* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 pp. 531-532 pl. liii fig. 5; *arnoldi* p. 530 pl. liii figs. 1-3, *nodobrachiatus* p. 530 pl. liii fig. 6, *ornatissimus* p. 530 pl. liii fig. 4, Id.

†*Calceocrinid*, SIEVERTS-DORECK 186 p. 78 fig. 8.

†*Carinocrinus eventus* sp. n. Carboniferous U.S.A., STRIMPLE J. Wash. Acad. Sci. 43 pp. 201-203 figs. 1-2.

*Cenolia trichoptera*, DAKIN, BENNETT & POPE 40 p. 327 pl. lxxxviii.

†*Cradeocrinus dendratus* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 p. 514 pl. li figs. 9-12, pl. lv figs. 3-4.

†*Cribanocrinus watersianus*, LAUDON & SEVERSON 101 p. 526 pl. lii figs. 20-22.

†*Crotalocrinus* ? sp., HOLTEDAHN 75 p. 203 fig. 78, 18 [stem].

†*Culmicrinus jeffersonensis* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 p. 515 pl. li figs. 29-30, pl. lv fig. 1.

†*Cupressocrinus* with *C. abbreviatus* figs. 6-7, pl. iv fig. 10, *crassus* figs. 1, 3-4, pl. iv figs. 8-9, *C. ? gibber* fig. 5, *C. gracilis* pl. iv fig. 7, *C. sp.* fig. 2, SIEVERTS-DORECK 186 p. 82.

†*Cyathocrinites* sp., LAUDON & SEVERSON 101 p. 513 pl. li figs. 13-14.

†*Dichocrinus quadriceptatus* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 pp. 534-535 pl. liv figs. 11-14, pl. lv fig. 26; *boze-manensis* p. 533 pl. liv figs. 15-16, *campto* p. 534 pl. liv fig. 17, *douglassi* p. 535 pl. liv fig. 10, Id.

†*Dinotocrinus logani* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 p. 516 pl. li figs. 23-27, pl. lv figs. 12-14.

†*Encrinurus liliiformis*, KUHN-SCHNYDER 96 p. 210 fig. 2b.

†*Eutaxocrinus montanensis*, LAUDON & SEVERSON 101 p. 523 pl. liv figs. 18-20.

†*Goniocrinus sculptilis*, LAUDON & SEVERSON 101 p. 514 pl. li fig. 22.

†*Holcoerinus longicirifer*, LAUDON & SEVERSON 101 p. 522 pl. li figs. 31-35, pl. lv fig. 2.

†*Hypselocrinus maccabei*, LAUDON & SEVERSON 101 p. 519 pl. li figs. 2-5.

†*Isocrinus*, discussion of genus p. 122, *nehalemensis* sp. n. pp. 135-139 figs. 35, 36 B-C, 37-39 A-C, pl. xix fig. 1, pl. xx figs. 1-2, pl. xxi fig. 2, pl. xxii fig. 1, pl. xxiii figs. 4, 7, 11, *oregonensis* sp. n. pp. 124-135 figs. 29-35, 36A, 36 D-E, 39D, pls. xiv-xviii, pl. xix figs. 2-5, pl. xx fig. 3, pl. xxii fig. 3, pl. xxiii figs. 1-3, 5-6, 8-10, pl. xxiv, Oligocene ? U.S.A., MOORE & VOKES Prof. Pap. U.S. Geol. Surv. 233E.

†*Lecanocrinus* with subgen. *Miracrinus* subgen. n. for type *M. perdewi* sp. n. Devonian U.S.A., BOWSER Smithsonian. misc. Coll. 121 9 pp. 3-7 figs. 1 a-e, pl. i figs. 1-11; *L. (Lecanocrinus) macropterus*, Id. p. 2 figs. 1 f-g.

*Leptometra phalangium*, TORTONESE 220 p. 171.

†*Linocrinus wilsallensis* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 p. 517 pl. li fig. 28, pl. lv fig. 15.

†*Miracrinus* subgen. n. see *Lecanocrinus*.

†*Myelodactylus canaliculatus* p. 76 pl. iv figs. 1-3, *M.* sp. p. 78 pl. iv figs. 4-6, SIEVERTS-DORECK 186.

†*Parulocrinus* ? sp., CHRONIC 27 p. 164 pl. xxxv figs. 5-6.

†*Pelecocrinus* sp., LAUDON & SEVERSON 101 p. 515 pl. li fig. 15, pl. lv fig. 6.

*Penroseocrinus* subgen. n., see *Austinocrinus*.

†*Pentacrinus* sp., MÜLLER 147 pl. i fig. 2.

†*Pentagonocyclopa* cf. *dispar*, WALTER 235 p. 701 pl. lxiii figs. 15-17.

†*Periechocrinites* sp., LAUDON & SEVERSON 101 p. 527 pl. lii figs. 1-2.

†*Platycrinites basicraniatus* p. 533 pl. liv fig. 1, pl. lv fig. 24, *canadensis* pp. 532-533 pl. liv fig. 8, pl. lv fig. 25, spp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27; *boze-manensis* p. 532 pl. liv figs. 2-7, *incomptus* p. 532 pl. liv fig. 9, Id.

†*Platycrinus asiatica* sp. n. Carboniferous Japan, MINATO J. Fac. Sci. Hokkaido Univ. Geol. Min. 7 1951 pp. 357-358 pl. i fig. 8, pl. iv figs. 2a-b.—*P. asiatica*, MINATO 128 p. 287 pl. i fig. 1.

†*Pseudosaccocoma japonica*, SHIKAMA 182 pl. xix fig. 8.

†*Ramulocrinus livingstonensis* sp. n. Carboniferous U.S.A., LAUDON & SEVERSON J. Paleont. 27 pp. 519-520 pl. li figs. 16-19, pl. lv figs. 8-9.

†*Rhodocrinites macrotumidus* pp. 524-525 pl. lii figs. 9-12, pl. lv figs. 17-18, *priminodosus* pp. 525-526 pl. lii figs. 6-8, pl. lv fig. 16, spp. n. Carboniferous

U.S.A., LAUDON & SEVERSON J. Paleont. 27; *cirrusi* p. 524 pl. lii figs. 3-5, *douglassi* p. 524 pl. lii figs. 13-19, Id.

†*Rhopalocrinus* with *R. gracilis*, SIEVERTS-DORECK 186 p. 85 pl. iv fig. 12.

†*Solanocrinus astrei* pp. 61-63 figs. 1-3, *estruchi* pp. 63-65 figs. 4-12, spp. n. Cretaceous Spain, BATALLER An. asoc. esp. Prog. Cienc. 6 1941.

*Tropiometra carinata*, FONTAINE 61 p. 33.

### †MACHAERIDIA

*Lepidocoleus sularpensis* sp. n. Ordovician Sweden, LINDSTRÖM Geol. Fören. Stockh. Förh. 75 p. 143 pl. i fig. 7.

### †EOCRINOIDEA

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### †PARACRINOIDEA

[Vacant.]

### †CYSTIDEA

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*Echinospaerites aurantium*, HOLTEDAHL 75 p. 165 fig. 74, 4-5.

### †CARPOIDEA

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*Myeincocystites* gen. n. p. 105 for type *M. natus* sp. n. Ordovician U.S.A., STRIMPLE J. Wash. Acad. Sci. 43 pp. 105-106 figs. 1-2.

*Trochocystites bohemicus*, MELENDEZ 121 p. 504 figs. 3-6, 8, pl. i figs. 1-6.

### †EDRIOASTEROIDEA

*Agelacrinites jasperensis* sp. n. Carboniferous Canada, HARKER J. Paleont.



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#### †BLASTOIDEA

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